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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ahmed H. Tewfik et al.  
Title: GENERATING UWB-OFDM SIGNAL USING SIGMA-DELTA MODULATOR

Docket No.: 600.583US1  
Filed: October 24, 2003  
Examiner: Unknown

Serial No.: 10/693,651  
Due Date: N/A  
Group Art Unit: 2661

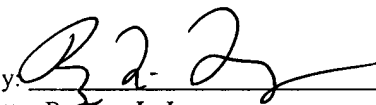
MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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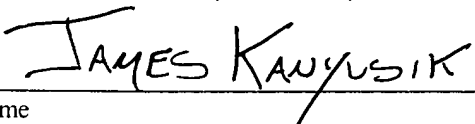
- ☒ A return postcard.
- ☒ A Communication Concerning Related Applications (1 pgs.).
- ☒ An Information Disclosure Statement (2 pgs.), Form 1449 (1 pgs), and copies of 11 cited documents.

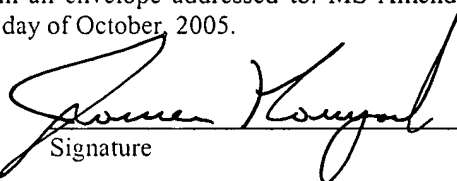
If not provided for in a separate paper filed herewith, Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
Customer Number 21186

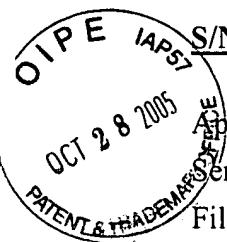
By:   
Atty: Rodney L. Lacy  
Reg. No. 41,136

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Name

  
Signature

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
(GENERAL)



S/N 10/693,651

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ahmed H. Tewfik et al. Examiner: Unknown  
Serial No.: 10/693,651 Group Art Unit: 2661  
Filed: October 24, 2003 Docket: 600.583US1  
Title: GENERATING UWB-OFDM SIGNAL USING SIGMA-DELTA MODULATOR

COMMUNICATION CONCERNING RELATED APPLICATIONS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related applications in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
10/191,769	July 8, 2002	600.569US1	HIGH BIT RATE ULTRA-WIDEBAND OFDM
10/973,945	October 25, 2004	600.608US1	DIGITAL RECEIVER STRUCTURES FOR UWB-OFDM SIGNAL USING SIGMA-DELTA MODULATOR

Respectfully submitted,

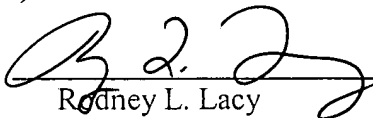
AHMED H. TEWFIK ET AL.

By Applicants' Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 373-6954

Date October 26, 2005

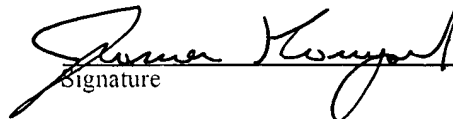
By



Rodney L. Lacy  
Reg. No. 41,136

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Name

  
Signature

S/N 10/693,651

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Ahmed H. Tewfik et al.	Examiner:	Unknown
Serial No.:	10/693,651	Group Art Unit:	2661
Filed:	October 24, 2003	Docket:	600.583US1
Title:	GENERATING UWB-OFDM SIGNAL USING SIGMA-DELTA MODULATOR		

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**INFORMATION DISCLOSURE STATEMENT**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicant respectfully requests that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicant requests that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicant with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

INFORMATION DISCLOSURE STATEMENT

Serial No : 10/693,651

Filing Date: October 24, 2003

Title: GENERATING UWB-OFDM SIGNAL USING SIGMA-DELTA MODULATOR

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Dkt: 600.583US1

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications are no longer required to be provided to the Office. Notification of this change was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004. Thus, Applicant has not included copies of any U.S. Patents or Published Applications cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicant's Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

AHMED H. TEWFIK ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 373-6954

Date October 26, 2005

By Rodney L. Lacy  
Rodney L. Lacy  
Reg. No. 41,136

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JAMES KAUYUSIK  
Name

[Signature]  
Signature



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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PTO/SB/08A(10-01)  
Approved for use through 10/31/2002. OMB 851-0031  
US Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Complete if Known

Application Number	10/693,651
Filing Date	October 24, 2003
First Named Inventor	Tewfik, Ahmed
Group Art Unit	2661
Examiner Name	Unknown

Sheet 1 of 2

Attorney Docket No: 600.583US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-2004/0005016 A1	01/08/2004	Tewfik, A.	07/08/2002
	US-4,116,103	09/26/1978	Deutsch, R.	07/12/1976
	US-5,677,927	10/14/1997	Fullerton, L. W., et al.	09/20/1994
	US-5,960,031	09/28/1999	Fullerton, L. W., et al.	10/10/1997
	US-6,331,997	12/18/2001	Li, D.	02/10/2000
	US-6,735,398	05/11/2004	Izadpanah, H., et al.	03/15/2000
	US-6,888,887	05/03/2005	Shattil, S. J.	09/10/1999

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		FOERSTER, J. R., "The Effects of Multipath Interference on the Performance of UWB Systems in an Indoor Wireless Channel", <u>53rd IEEE Vehicle Technology Conference (VTC 2001 Spring)</u> , Vol. 2, 1176-1180	
		FONTANA, R. J., et al., "An Ultra Wideband Communications Link for Unmanned Vehicle Applications", <u>Association for Unmanned Vehicle Systems International (AUUSI '97, Baltimore, June 3-6, 1997)</u> , 6 Pages	
		GERAKOULIS, DIAKOUMIS, et al., "An Interference Suppressing OFDM System for Ultra Wide Bandwidth Radio Channels", <u>Proceedings of the IEEE Conference on Ultra Wideband Systems and Technologies</u> , (2002),259-264	
		GERAKOULIS, DIAKOUMIS, et al., "Link Performance of an Ultra Wide Bandwidth Wireless In-Home Network", <u>Proceedings of the Seventh International Symposium on Computers and Communications</u> , (July 1, 2002), 699-704	
		GUPTA, R., et al., "Capacity of Ultra-Wideband OFDM", <u>57th IEEE Semiannual Vehicle Technology Conference (VTC 2003 Spring)</u> , Vol. 2, 1420-1424	
		SABERINIA, E., et al., "Generating UWB-OFDM Signal Using Sigma-Delta Modulator", <u>57th IEEE Semiannual Vehicular Conference (VTC 2003 Spring)</u> , Vol. 2, 1425-1429	
		SABERINIA, E., et al., "N-Tone Sigma-Delta UWB-OFDM Transmitter and Receiver", <u>IEEE International Conference on Acoustics, Speech, and Signal Processing 2003 (ICASSP '03)</u> , Vol. 4, IV-129-IV-132	
		SABERINIA, E., et al., "Pilot Assisted Multi-User UWB Communications", <u>57th IEEE Semiannual Vehicle Technical Conference (VTC 2003 Spring)</u> , 5 Pages	
		SABERINIA, E., et al., "Synchronous UWB-OFDM", <u>IEEE International Symposium on Advances in Wireless Communications 2002 (ISWC '02)</u> , 41-42	
		TEWFIK, A. H., et al., "High Bit Rate Ultra-Wideband OFDM", <u>Proceedings of the IEEE Global Telecommunications Conference</u> , Vol. 1, Taipei, Taiwan,(11/17/2002),2260-2264	

**EXAMINER****DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 909. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)



Complete if Known

Application Number	10/693,651
Filing Date	October 24, 2003
First Named Inventor	Tewfik, Ahmed
Group Art Unit	2661
Examiner Name	Unknown

Sheet 2 of 2

Attorney Docket No: 600.583US1

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		WIN, M. Z., et al., "Ultra-Wide Bandwidth Time-Hopping Spread-Spectrum Impulse Radio for Wireless Multiple-Access Communications", <u>IEEE Transactions on Communications</u> , 48(4), (2000), 679-691	

**EXAMINER****DATE CONSIDERED**

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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached